



MISSOURI BOTANICAL GARDEN

PETER H. RAVEN LIBRARY



GEORGE ENGELMANN BOTANICAL NOTEBOOKS

Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Opuntia

"vulg. Nopal"

flour, jaunes.

Rockers, de Guadalupe pris Mexico
C. Bourgeau N. 46

20 May 1865

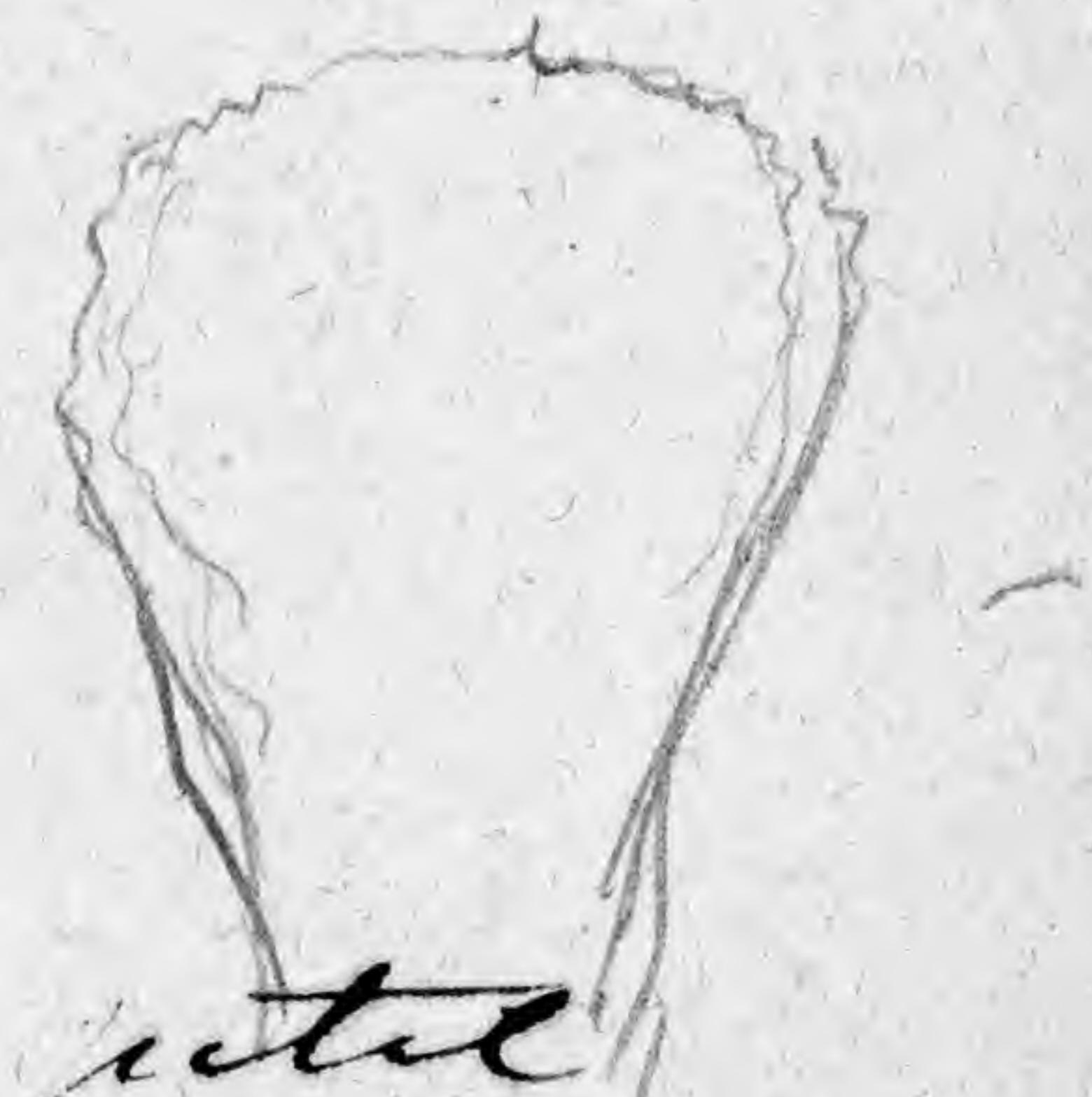
Expo. - Paris - 16 Mai Paris April 1869
Joints oval 10-12 inches by 6-7
wide pubescent

Areoles (at least in the dried specimen)
about 1 inch apart, bearing numerous (5-10)
acicular appressed spines, larger ones
whitish with yellow bases, somewhat
flattened, bristles very short, brown,
almost hidden in the wool

Flower "yellow"
ovary obovate inch long strongly
pubescent, bearing about 60-80
areoles, with light brown wool
and bright brown bristles,



outer sepal
green part also
pubescent.



apparently about 8 subequal stigmas
stamens & a petal taken al
also a fragm of joint
and ovary)



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

2563

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

46. 61(a) Bourgeau, May 10
Mus. Paris April 1869

The number attached to these specimens
refers to the label in another sheet.

(*Opuntia flexuosa*, Guadalupe)
Mexico, 20 May 1865

but neither joint nor flowering stem
to belong here, and both evidently
differ among themselves.

Joint 6-7 sub, by 4-5 wide
broadly obovate; areoles back
apart with a larger protruding ^{petiole} and
a smaller lower more deflexed
spine - strong bright brown
bristles surface smooth.

Ovary attached to joint -
(not flowers on it smooth to
30-40 areoles with brown wool
and a few brown bristles on the
upper areoles.

for flowers see next page

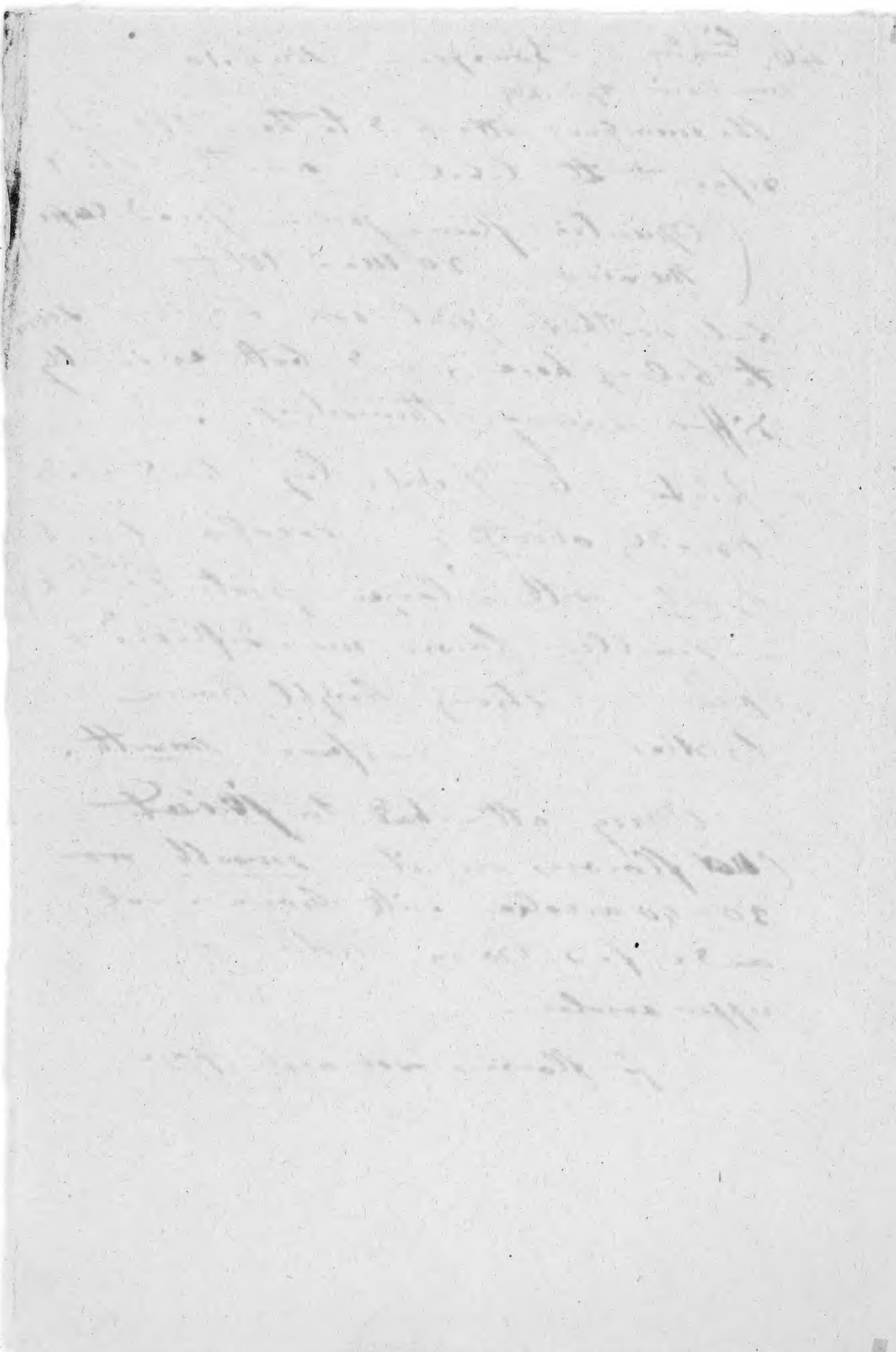


0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN



0 1 2 3 4 5 6 7 8 9 10
cm

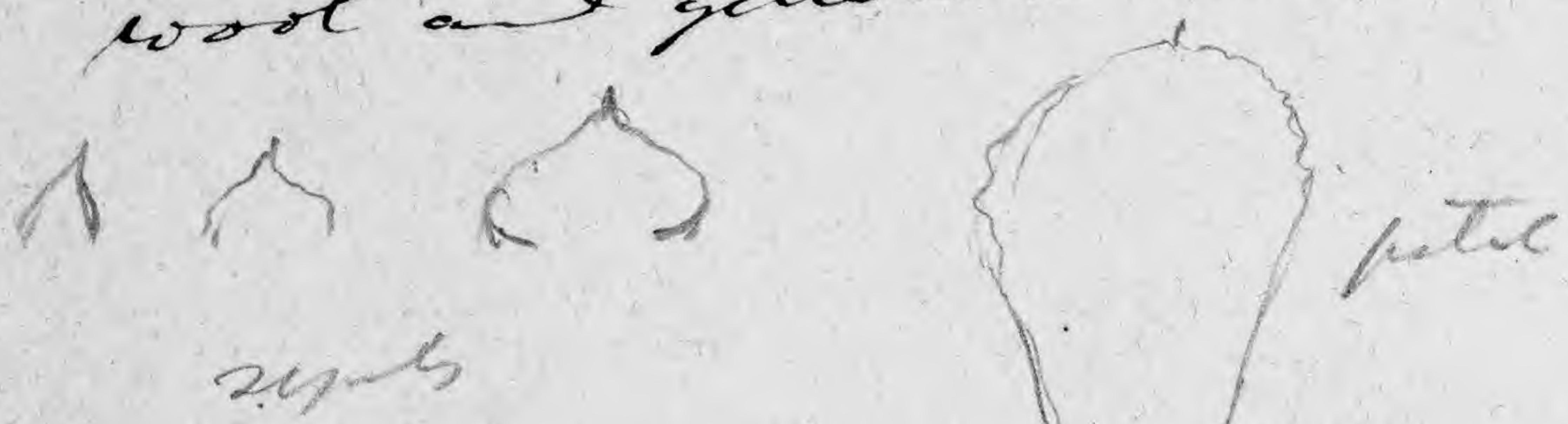
copyright reserved



MISSOURI
BOTANICAL
GARDEN

46 sub (b)

Flowers vividly reddish yellow
ovary 1-1½ in. long pubescent
with 40-50 areoles with light brown
wool and yellowish brown bristles



sepals unusually brown; petals
obovate - spatulate distalolate spreading
often mucronate - never obcordate
(This is the form of petals in all
the species seen 305 and 46 a & b.)
Style with 6-8 erect stigmas



0 1 2 3 4 5 6 7 8 9 10

cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

2564

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

Opuntia

feuilles rouges

Guadeloupe Mont de Hidalgo, vallée
de Mexico

E. Bourgeau 21. Jan 1865

Dep. française — Mus Paris Apri 1869

Evidently much confusion in the
specimens:

Parts of a joint almost glabrous
but with traces of pubescence
evidently (dry) about 11 inches long
and 7 wide;

areolae $1\frac{1}{4}$ - $1\frac{1}{2}$ inches apart all
spiny; spines and bristles very similar
to those of No. 46. 5-10 in number
appressed, $\frac{1}{2}$ - 1 inch long, larger ones
somewhat angular.

Fruit (not ripe) attached to the plant
(no mistake therefore) smooth

obovate with very numerous, brown
areolae, (70-80)
with bright brown
bristles and
sometimes a short
spine or two.



so far so good - but see next page



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

irregular
Seeds small with narrow rim
but unripe -

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

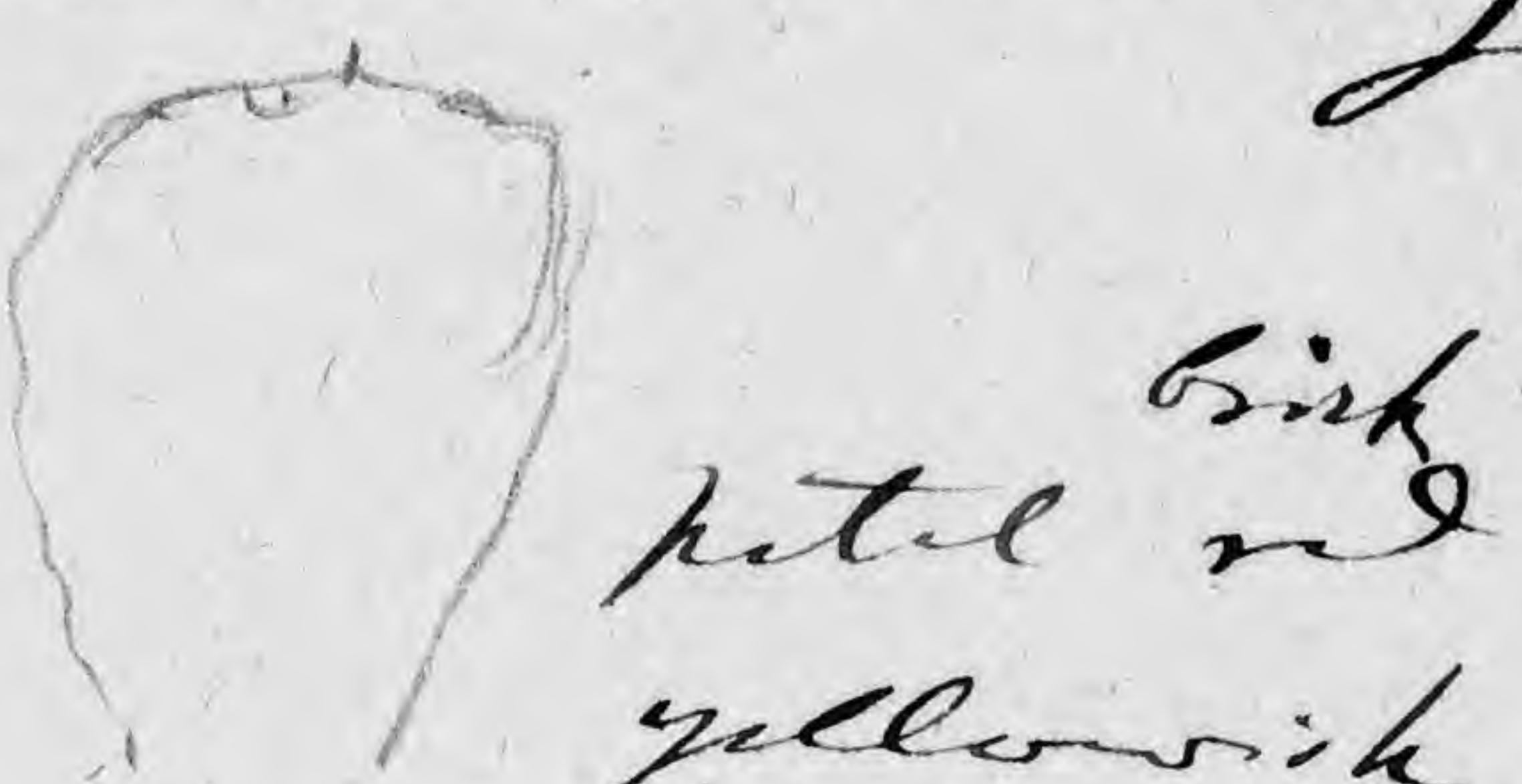
The small red flowers found in
the same sheet have a very pubescent
ovarium with 45 or 50 areolae
with bright reddish brown bristles and a few
spines - sepals very pubescent, with
stiff persistent awl, about 1 mm long.



sepals of tube



7 or 8 red stigmata



pink
petal red
yellowish
at base



0 1 2 3 4 5 6 7 8 9 10
cm

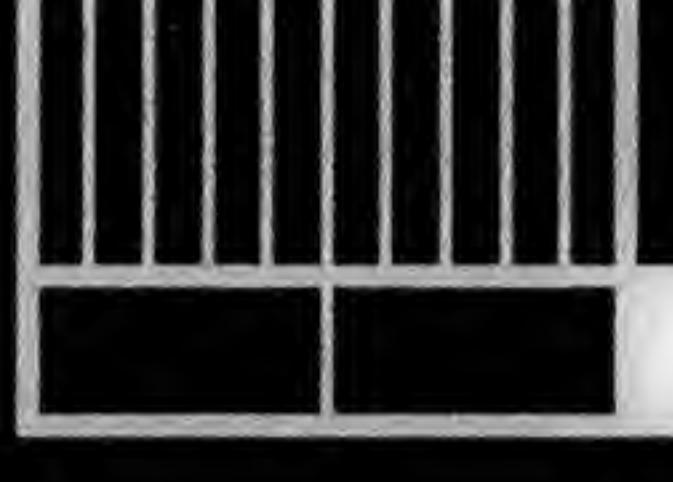
copyright reserved



MISSOURI
BOTANICAL
GARDEN

2565

MISSOURI BOTANICAL GARDEN
GEORGE Engelmann PASTURE



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

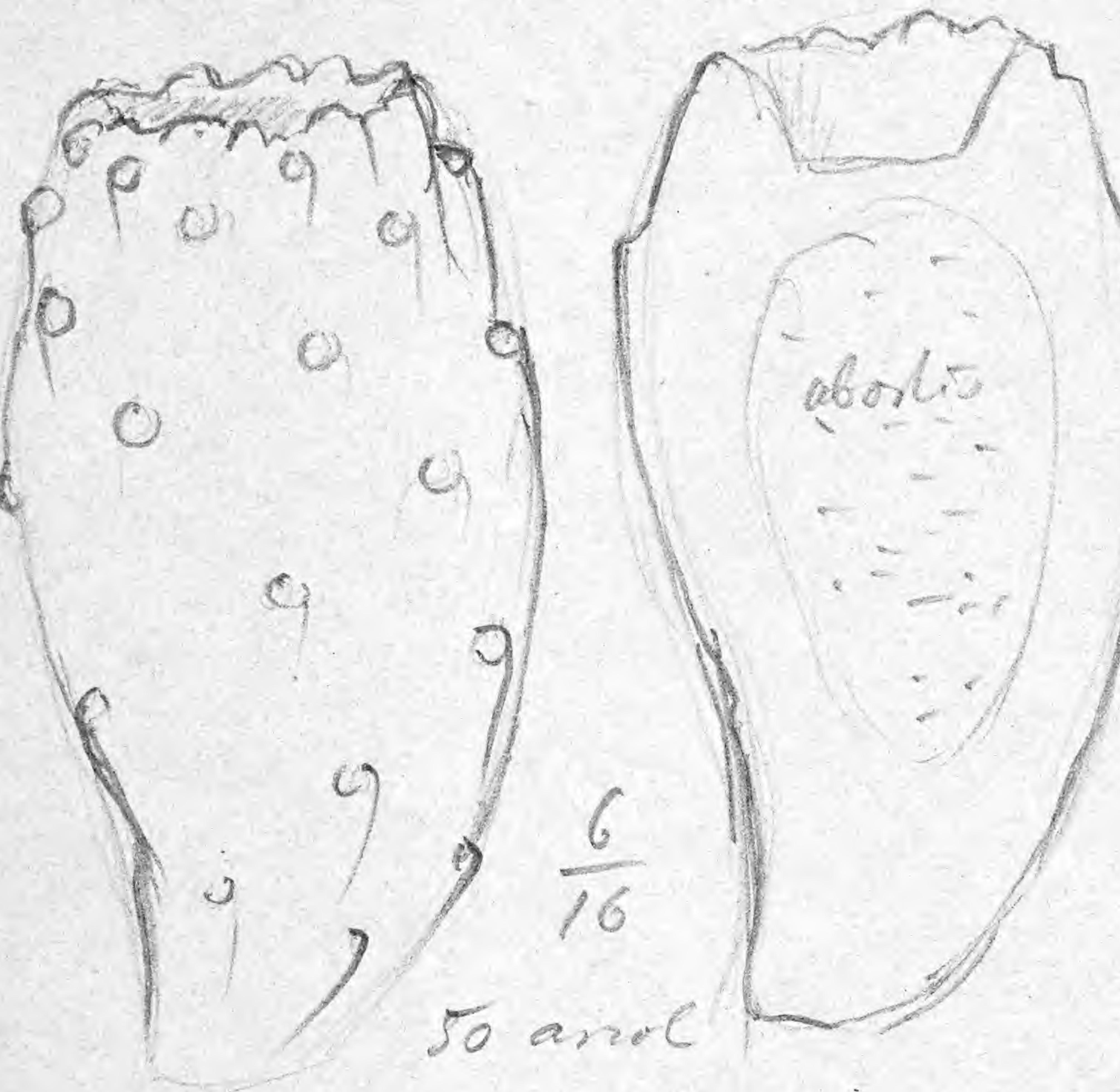
Opuntia "decumbens"

Hort Thuret, Adans.

Febr 25 1869

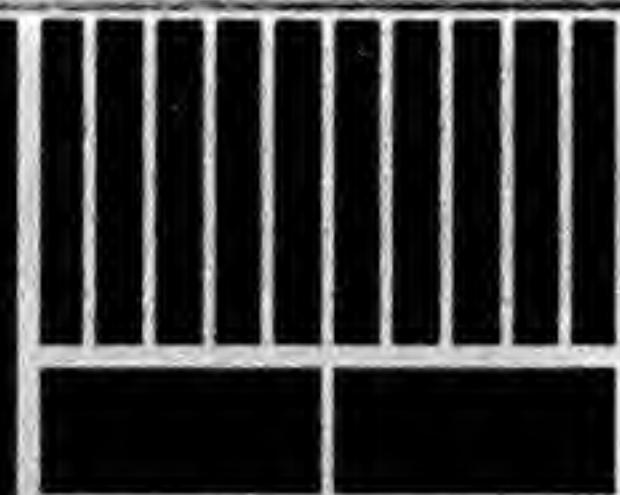
at Montpellier, March 2nd

at young erect plant
misnamed, joints near
a foot long & as wide,
oblong-oval, thick,
with distant small areoles
bearing here and there
a few spines, much like
O. Ficus Indica.



fruit obovate - clavate
 $2\frac{1}{4}$ - $2\frac{1}{2}$ inches long $1\frac{1}{4}$ -
diameter, greenish yellow
with reddish brown tinge,
slightly tubercled or almost
smooth - weight 40 - 50
areoles, with brownish areole
and very short bristles. Areole
diameter $\frac{5}{12}$ and $\frac{6}{16}$ arrangement

Umbilicus deep, almost flat at bottom.
pulp greenish yellow; find only 2 seeds in
one fruit developed, other fruits sterile
Seems to be = *O. elongata* of Naples. fruit
a little more attenuate at base.



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

2566

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10

cm

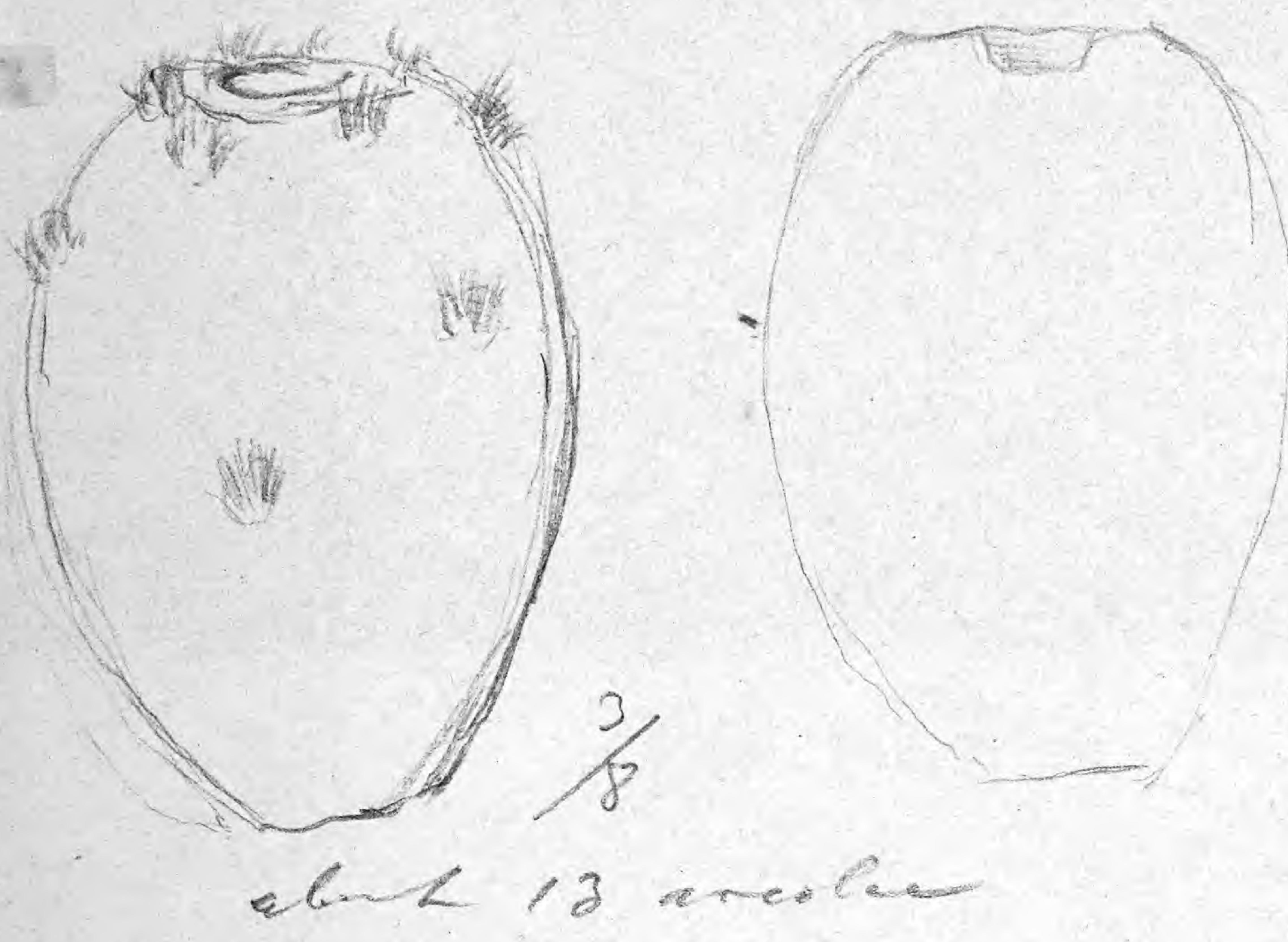
copyright reserved



MISSOURI
BOTANICAL
GARDEN

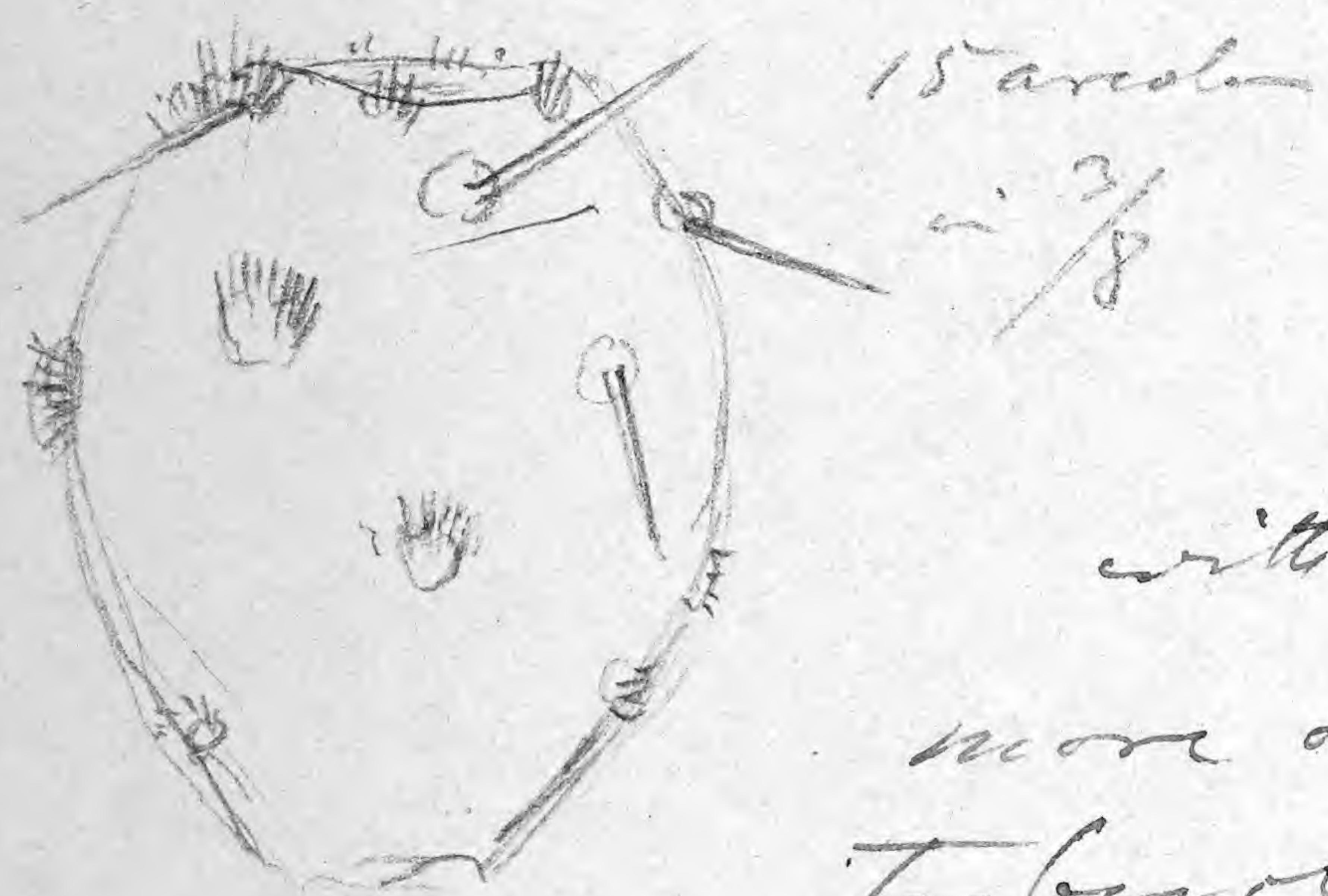
Opuntia "signicava"
Molophilus, March 2

Host Thicket Antibes
Feb 25 1869
pale green, somewhat glaucous



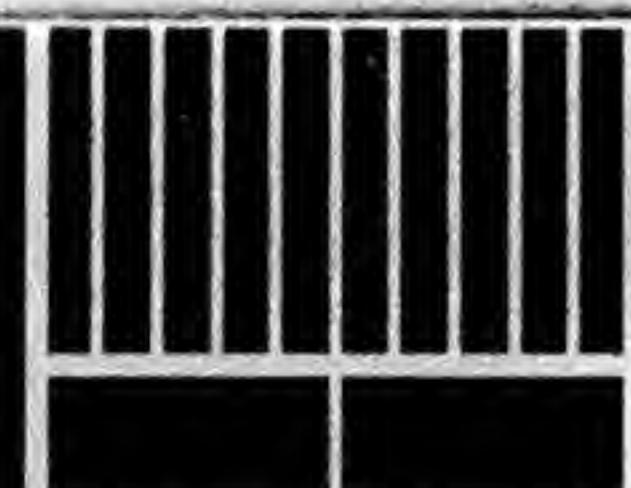
Erect (yet young)
joints obovate - 6-8"
long, 4-5" wide,
rather thin, but
with prominent pectilli
on the large or older
areoles $1\frac{1}{4}$ - $1\frac{3}{4}$
inches apart,

areoles with light brown wool, very short few
bristles, but 3-5 or 6 light brown
stout spines, diameter 1- $1\frac{1}{2}$ or $1\frac{3}{4}$
inches long, some of them compressed.



berry $1\frac{1}{2}$ to $1\frac{3}{4}$ inches
long, $1\frac{1}{4}$ inch thick -
obovate or globose - obovate,

with few (13-15) areoles,
more on upper part, not
tuberized; areoles bearing
numerous stout & long yellowish -
light brown bristles, - brown wool and
often a single stoutish yellowish brown spine;
Berry purple inside and outside,
succulent, with flat rim, immersed only in



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

centre; seeds large, rather numerous

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

2587



0 1 2 3 4 5 6 7 8 9 10

cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

Opuntia acanthocarpa

Hort Thuret, Chatibey

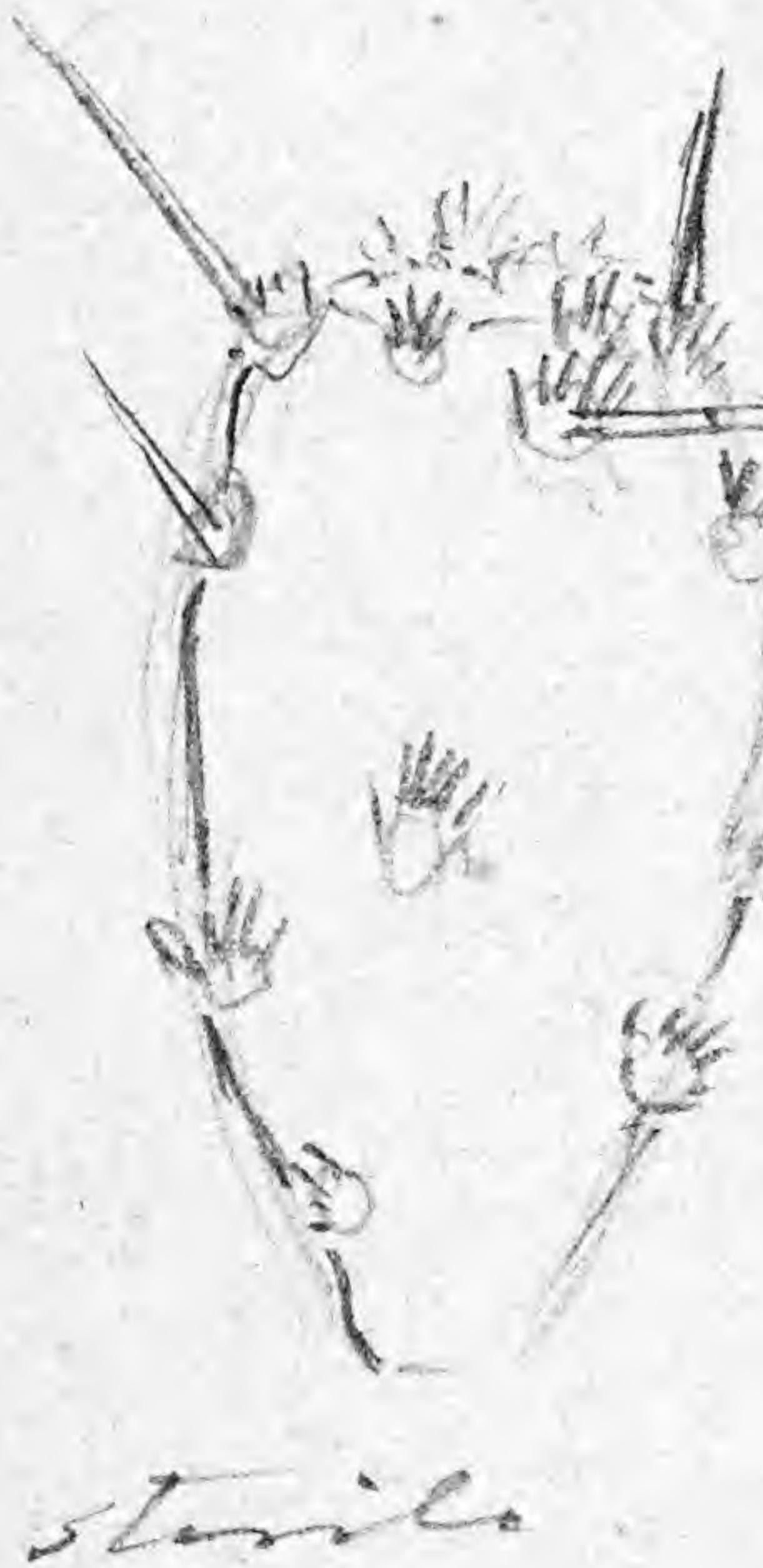
Febr. 25 1869

(Montpellier, March 22)



16-18
areolae

5
13

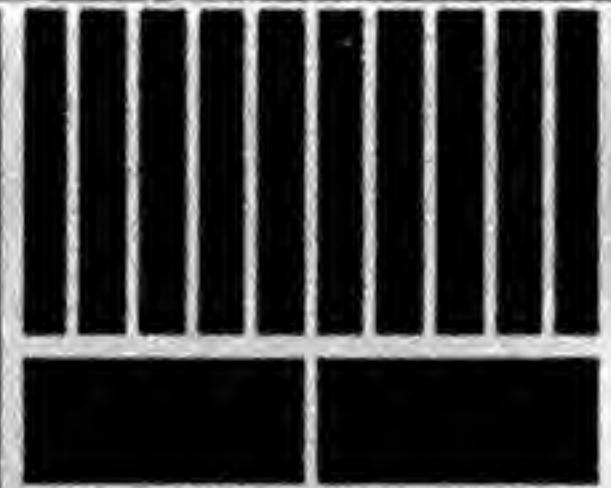


15-16
areolae

3
8

sterile

fruit very similar to that of *Op. polyacantha* - small (scarcely more than 1 inch long) obovate - clavate, a little shrivelled and subulate, with large and prominent areolae 15-18 in number, with white wool and strong and few - pointed pale brown bristles and occasionally a stout brownish spine, pubescent immersed colour of berry reddish outside, greenish to rose red inside. In 5 berries examined I found a single seed only which seemed to be well formed; it was thickly covered with the tough down, found also in *Opuntia monacantha* and others.



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

2568

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10
cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

Opuntia

at Weber's, Paris
March 1869

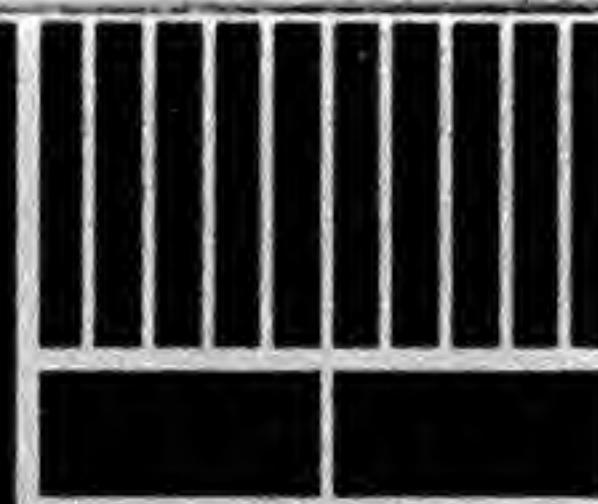
Tuna chavenna

under that name cultivated from Venado
southward to San Luis Potosi; a tall plant,
bearing a sweet pleasant tasting fruit, which
is much brought to market.

Flower red.

Fruit of the size of an egg, wine-red,
pulp reddish

Seed large, much compressed (raised of
Oppenroffs)



0 1 2 3 4 5 6 7 8 9 10

cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

2569

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10

cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

at Dr. Weber's Paris Market
Opuntia Larreyi, Weber Miss 1869

"*Camuissa*"

the best of all tasted by Dr. Weber delicious to eat. Collected about Queretaro

Plant only 3 - 4 feet high, joints large, orbicular, glaucous

[therefore perhaps = *O. robusta* or *O. crassa* -]

Fruit as large as a goose egg; purple inside outside, juicy.

Seeds small, much like those of the *Hedysarum* Ficus Indica



0 1 2 3 4 5 6 7 8 9 10
cm

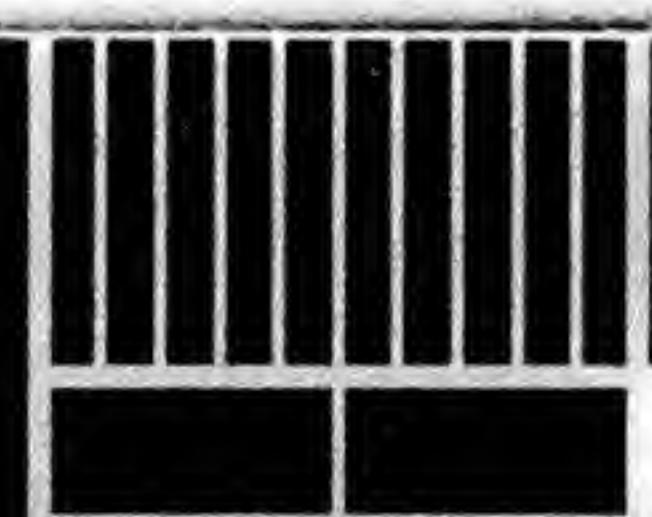
copyright reserved



MISSOURI
BOTANICAL
GARDEN

2570

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10

cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

at Dr Weber's, Paris March
1869

Opuntia

"Tuna Blanca

Cult. under that name about San Luis Potosi
plant high (10 feet?) quite spiny,
fruit very large, ovoid, pulp whitish
~~most like any other species, but a day~~
cultivated for the use of the fruit, which is
much esteemed, but not as frequently as "Cardona"
[Could it be a form of *O. Ficus Indica*?
but the seed is much larger than that
of the Italian forms of that species.]
Raised from these seeds at Pfeendorff's



0 1 2 3 4 5 6 7 8 9 10

cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

2571

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10

cm

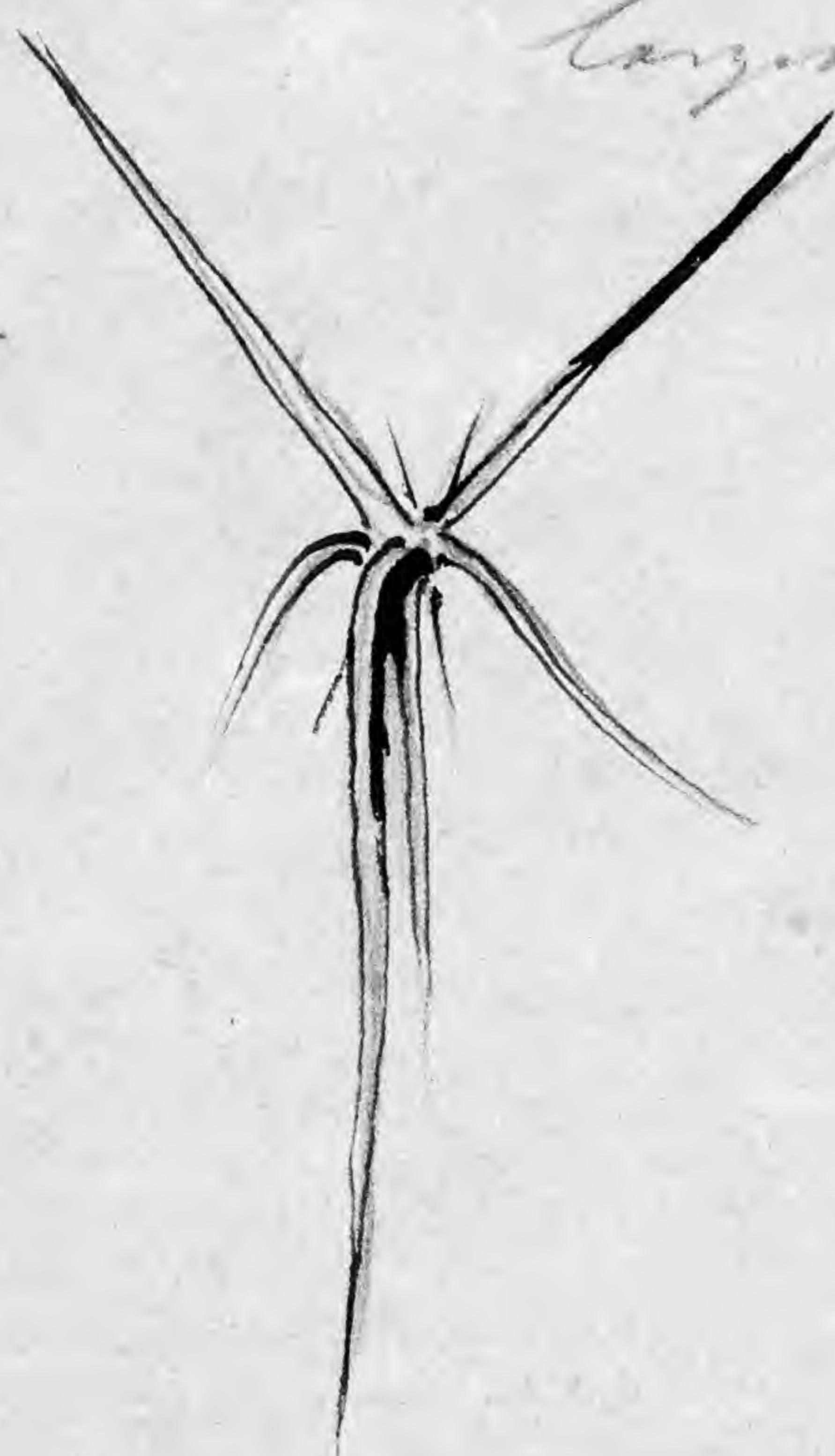
copyright reserved



MISSOURI
BOTANICAL
GARDEN

Paris, March 1869
Opuntia Coindetii Weber var. ("Cardona vulg")

Most commonly cultivated in and about St. Louis, also native there, abundantly eaten fresh and mashed and dried in a paste or cheese like ^{large} ~~form~~, — also drunk with the ^{purple} juice expressed and drunk with water like Orangeade. (queso de Tuna, cheese of Tuna!) an important article of their diet.

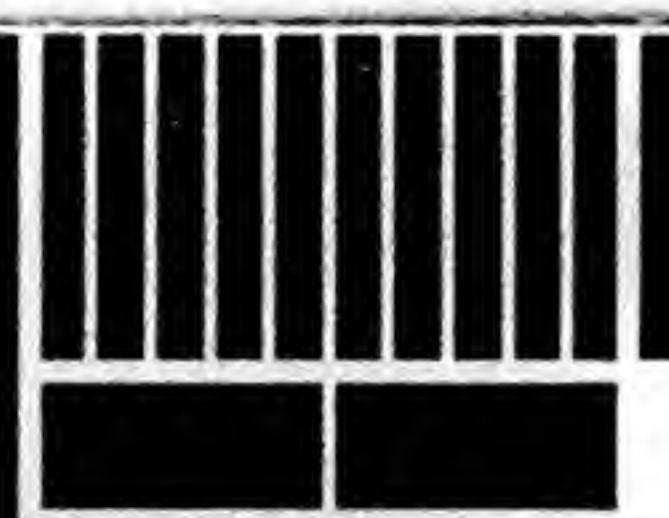


Fruit ovoid, smaller than that of *Tuna dulca*, red inside and out side — not so deep red as *O. Dillenii*.

Very tall (9-12 feet high) large jointed erect plant. (cult. in Paris from Dr. Weber's seeds). About San Luis more commonly in cultivation than the Common Tuna, which Dr. Weber has taken for *O. Tuna dulca*, but which according to the seeds, seems to be something else.

Fruit (according to Dr. Weber's notes) ovoid, smaller than that of "Tuna dulca" red inside and out, but not so deep red as *O. Dillenii*.

Spines numerous; lower ones and especially central ones bent downward reflexed, as shown in the above figure taken from a branch of spines in Dr. Weber's possession. —



0
cm

1 2 3 4 5 6 7 8 9 10

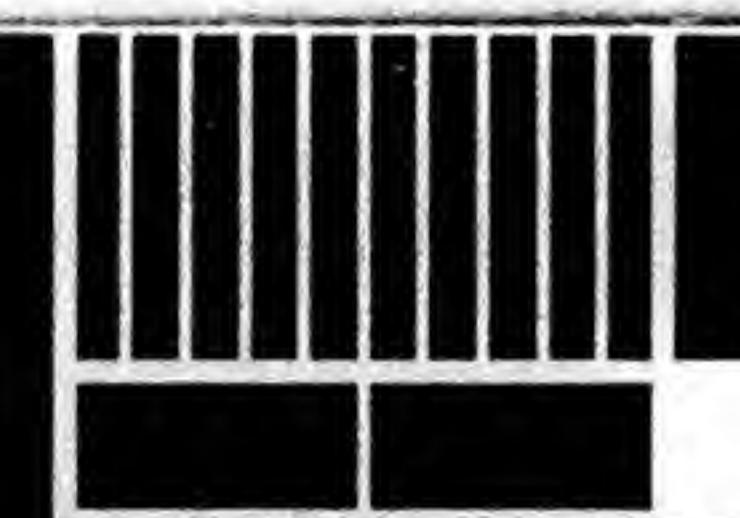
copyright reserved



MISSOURI
BOTANICAL
GARDEN

2572

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0
cm

1 2 3 4 5 6 7 8 9 10

copyright reserved



MISSOURI
BOTANICAL
GARDEN